

## WHAT IS CLAIMED IS:

1. A breath alcohol measuring device, comprising:

a holder; and

a mouthpiece designed as a pressure tube with a hole for sampling breathing gas for an  
5 alcohol sensor, the mouthpiece having a trapezoidal cross section, which is complementary to a  
corresponding negative shape in said holder for a flush mounting of said mouthpiece.

2. A breath alcohol measuring device in accordance with claim 1, wherein the  
trapezoidal cross section of the mouthpiece is equilateral, and said hole for taking a breath  
sample is located in a shorter of two parallel sides of the cross section of the mouthpiece.

10 3. A breath alcohol measuring device in accordance with claim 1, wherein the alcohol  
measuring device has a parallelepipedic form and said mouthpiece is received in said holder  
extending in parallel to one of two shorter end faces of the parallelepipedic breath alcohol  
measuring device.

15 4. A breath alcohol measuring device in accordance with claim 2, wherein said  
mouthpiece has a stop extending outside in a circumferential direction of the trapezoidal cross  
section over at least some sections of said trapezoidal cross section, said stop setting a position of  
said mouthpiece in the longitudinal direction in relation to said holder for alignment of an  
extending suction channel for sampling breathing gas to said hole.

5. A breath alcohol measuring device in accordance with claim 1, wherein said mouthpiece has a positioning pin, which is arranged outside said holder when the mouthpiece is mounted in said holder.

6. A breath alcohol measuring device in accordance with claim 4, wherein the alcohol sensor includes an electrochemical alcohol sensor in flow connection with said suction channel and a pump, wherein the breathing gas is sampled by means of a sampling stroke of said pump, said pump being arranged downstream of said electrochemical alcohol sensor with the breathing gas being drawn through said electrochemical alcohol sensor.

7. A breath alcohol measuring device in accordance with claim 2, wherein said holder and said mouthpiece are symmetrical in relation to the breath alcohol measuring device whereby said mouthpiece can be mounted in said holder without a preferred direction in two different positions forming an angle of  $180^\circ$  with each other.

8. A breath alcohol measuring device, comprising:  
a sensor housing with a suction channel;  
a holder connected to said sensor housing, said holder having a receiving portion; and  
a mouthpiece with a breathing gas passage with a hole for sampling breathing gas, the mouthpiece including a portion with surfaces defining a trapezoidal cross section, said receiving portion of said holder being complementary to some of said surfaces defining the trapezoidal cross section for a flush mounting of said mouthpiece to said holder.

9. A breath alcohol measuring device in accordance with claim 8, wherein the trapezoidal cross section of the mouthpiece is equilateral, and said hole for taking a breath sample is located in a shorter of two parallel sides of the cross section of the mouthpiece.

10. A breath alcohol measuring device in accordance with claim 8, wherein said sensor housing has a parallelepipedic form and said mouthpiece is received in said holder extending in parallel to one of two shorter end faces of the parallelepipedic sensor housing.

11. A breath alcohol measuring device in accordance with claim 9, wherein said mouthpiece has a stop extending radially outwardly of the trapezoidal cross section over at least some sections of said trapezoidal cross section, said stop setting a position of said mouthpiece in a longitudinal direction in relation to said holder for alignment of an extending suction channel for sampling breathing gas to said hole.

12. A breath alcohol measuring device in accordance with claim 9, wherein said mouthpiece has a positioning pin, which is arranged outside said holder when the mouthpiece is mounted in said holder.

13. A breath alcohol measuring device in accordance with claim 11, wherein the alcohol sensor includes an electrochemical alcohol sensor in said sensor housing and in flow connection with said suction channel and includes a pump in said sensor housing, wherein the breathing gas is sampled by means of a sampling stroke of said pump, said pump being arranged downstream

of said electrochemical alcohol sensor with the breathing gas being drawn through said electrochemical alcohol sensor.

14. A breath alcohol measuring device in accordance with claim 9, wherein said holder and said mouthpiece are symmetrical in relation to said sensor housing whereby said mouthpiece  
5 can be mounted in said holder without a preferred direction in two different positions forming an angle of 180° with each other.